

REMARKS

Applicant acknowledges the indication of the allowability of the subject matter of Claim 5, as set forth at the bottom of page 3 of the Office Action. In particular, Claim 5 would be allowable if rewritten in independent form. However, for the reasons set forth hereinafter, Applicant respectfully submits that all claims of record are now allowable.

The drawings have been objected to under 35 U.S.C. §1.83(a) for allegedly failing to show every feature of the invention specified in the claims. In particular, the Office Action states that the feeding of the reference pulse from the burst to the comparator, such that based on the reference pulse a signal value is processed in the comparator, is not shown. In this regard, the Office Action further notes that Figure 2 of the drawings does not include a path from the input S_1 to the reference terminal (terminal 1) of the comparator. Rather, only the output of the DAC is shown as supplying the reference terminal of the comparator.

In response to the foregoing ground of objection, Applicant has amended Claim 3 in a manner which addresses the issues raised in the Office Action. It should be noted that the specification provides that the input analog signal I_s is fed to the input port 2 of the comparator K. Claim 3 as amended further specifies that the step of feeding the analog signal in Claim 1 comprises feeding "a preselected pulse, from a preselected position within the burst, to the second input port of the comparator". Thus amended, Claim 3 clearly does not call from feeding the preselected pulse from the input pulse train to the first input port of the comparator.

It is Applicant's belief that the confusion in the latter regard may have been fostered, in part, by the coincidental use of the same word "reference" to designate not only the "reference threshold" (which is input to the first input port of the comparator), but also, the preselectable "reference pulse", being a pulse within the input analog pulse train at a preselected position *m* within the pulse train, which is input to the input port 2 of the comparator. In order to clarify this point, Applicant has amended both the specification and claims so that the pulse which is taken from the input pulse train and fed to the second input port of the comparator is referred to simply as the "preselected pulse". (See paragraph 18, for example.) With Claim 3 amended as referred to previously, and revision of the specification to eliminate the similar terminology, Applicant respectfully submits that every feature of the invention as specified in the claims is properly depicted in the drawings.

In order to further facilitate a clear understanding of the foregoing point, Applicant has proposed herewith to insert an additional Figure 3 into the drawings, which illustrates the pulse bursts referred to in paragraphs [0017]-[0019] of the specification. Accordingly, reconsideration and withdrawal of the objection to the drawings as set forth at page 2 of the Office Action is respectfully requested.

Claims 1-4 and 6 have been rejected under 35 U.S.C. §102(b) as anticipated by Veerhoek et al (U.S. Patent No. 5,057,841). However, as discussed in greater detail hereinafter, Applicant respectfully submits that all claims which remain of record herein distinguish over Veerhoek et al whether considered by itself or in combination with other references.

As noted in the Office Action at page 3, Veerhoek et al discloses a successive approximation analog-to-digital converter in which overlapping measurement ranges are used in the successive conversion steps in order to reduce the susceptibility of the system to errors. As noted in the Office Action Figure 1 of Veerhoek et al includes a comparator 11, a digital-to-analog converter 7, and a digital register 1, which generates digital signals that are fed to the digital-to-analog converter. A balancing process is also used.

In contrast to the present invention, however, Veerhoek et al does not teach or suggest an analog-to-digital converter in which a particular predefinable pulse is taken from each of a succession of pulse "bursts", with the signal value at the pulse center being processed in the comparator, as described in Claim 3. As noted at paragraph 18 of the specification, this technique eliminates errors which can result due to so-called "burst droop" in which the actual signal varies within a burst, due to heating of the circuitry used for measurement. Veerhoek et al does not address this problem, and does not suggest an arrangement such as that recited in Claim 3 and in Claim 6. Accordingly, the latter claims are believed to distinguish over Veerhoek et al. Since Claim 4 depends from Claim 3, and Claim 5 has previously been indicated to be directed to allowable subject matter, Applicant respectfully submits that all claims of record in this application are now allowable.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any

Serial No. 10/764,489
Reply Dated: February 18, 2005
Reply to Office Action Mailed November 18, 2004

deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #056228.53101US).

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gary R. Edwards", written over a horizontal line.

Gary R. Edwards
Registration No. 31,824

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844
GRE:kms
361642v1

Serial No. 10/764,489
Reply Dated: February 18, 2005
Reply to Office Action Mailed November 18, 2004

Amendments to the Drawings:

The attached sheet of drawings includes a proposed new Fig. 3.